



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,028	08/17/2001	Toru Hayase	0445-0302P-SP	2692
2292 7590 04/23/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER ANDERSON, CATHARINE L	
			ART UNIT	PAPER NUMBER
			3761	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/23/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/23/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

**Office Action Summary**

Application No.

09/931,028

Applicant(s)

HAYASE ET AL.

Examiner

C. Lynne Anderson

Art Unit

3761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 23 January 2007 have been fully considered but they are not persuasive.

In response to the applicant's argument that neither Watanabe nor Yamaki disclose all aspects of the claimed invention, it is noted that the table on Page 6 of the Reply by the applicant shows that all elements not shown by Watanabe are disclosed by Yamaki. Therefore, when modified or combined with Yamaki, Watanabe discloses all claimed limitations.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Yamaki teaches advantages for each of the individual elements used to modify Watanabe, as described in the rejection under 35 USC 103(a) below.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 3761

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (5,449,353) in view of Yamaki et al. (5,858,012).

With respect to claims 1 and 2, Watanabe discloses all aspects of the claimed invention with the exception of a pair of cuffs and the exterior member comprising inner and outer sheets. Watanabe discloses a shorts-type disposable diaper 1, as shown in figure 2, comprising a liquid permeable topsheet 2, a liquid impermeable anti-leakage sheet 3, and an absorbent core 4. The diaper 1 has a body-surrounding portion 5a and 5b, and a plurality of body-surrounding elastic members 16 extending in a circumferential width direction of the diaper 1 between the leg and waist portions, as shown in figure 6. The elastic members 16 are disposed in the side portions of the diaper 1 and are not disposed in at least a center portion of where the absorbent core 4 exists. The elastic members 16 are secured in their stretched state and form gathers, as disclosed in column 7, lines 14-22. The elastic members are disposed between and joined to the topsheet and the anti-leakage sheet, which are the inner and outer sheets of the exterior member of the diaper. The elastic members 16 are cut at their center portion so that they are not disposed in at least the center of the portion of the diaper 1 where the absorbent core 4 exists, as shown in figure 6. The elastic members 16 extend laterally across the lateral extent of each end portion of the diaper such that at least a portion of the elastic members 16 extend laterally from a position substantially co-extensive with the absorbent core 4, as shown in figure 5. The absorbent core 4 terminates before the end portion of the diaper, as shown in figure 1.

Yamaki teaches the use of a pair of cuffs 39 provided on lateral sides of an absorbent core, the cuffs 39 being fixed to a topsheet 36 over the length of the absorbent core. The pair of cuffs 39 provide a pocket for containing liquid to prevent leakage from the article, as disclosed in column 3, lines 9-26.

It would therefore be obvious to one of ordinary skill in the art at the time of invention to provide the article of Watanabe with a pair of cuffs, as taught by Yamaki, to prevent leakage.

Yamaki teaches the use of an exterior member 1 having an inner sheet 17 and an outer sheet 18, with body-surrounding elastic members 21 disposed therebetween, as shown in figure 3. A liquid-impermeable anti-leakage sheet 37 is disposed adjacent the inner sheet 17 of the exterior member to prevent liquid from leaving the absorbent core. The exterior member comprising both inner and outer sheets with the elastic members disposed therebetween provides extra support to the absorbent core, as disclosed in column 2, lines 18-20.

It would therefore be obvious to one of ordinary skill in the art at the time of invention to provide the article of Watanabe with an exterior member having inner and outer layers, with elastic members disposed therebetween, as taught by Yamaki, to provide extra support to the absorbent core.

With respect to claim 3, Yamaki shows in figure 3 the inner sheet 17 of the exterior member fixed to the absorbent body by partial bonding at bond points 41.

With respect to claims 4 and 8, Watanabe shows in figure 1 an elastic member 8 fixedly disposed in the waist opening portion, and having a greater elongation stress

Art Unit: 3761

than the body surrounding elastic members 16, as disclosed in column 7, line 58 to column 8, line 1, and therefore has a greater 30% elongation stress. Given the ranges of elongation stresses disclosed, the ratio of elongations stresses will be between 1.5 and 6.0.

With respect to claim 6, Watanabe discloses all aspects of the claimed invention with the exception of the body-surrounding elastic members having inward ends that are slightly overlapping the absorbent core. It would have been an obvious matter of design choice to have the elastic members slightly overlap the absorbent core, since the applicant has not disclosed that this configuration serves any particular purpose or solves any stated problem, and it appears the invention would function equally well with the elastic members overlapping or not overlapping the absorbent core.

With respect to claim 7, the ratio of the width of the absorbent core 4 to the width of the diaper 1 is between 30% and 60%, as shown in figure 1. The ratio of the width of the portions containing the elastic members 11b to the width of the diaper 1 is between 40% and 95%, as shown in figure 1.

With respect to claim 9, Watanabe, when combined with Yamaki, discloses different sheets for the inner sheet, the outer sheet, and the anti-leakage sheet.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (5,449,353) in view of Yamaki et al. (5,858,012), and further in view of Iskra (5,021,050).

Watanabe, as modified by Yamaki, discloses all aspects of the claimed invention but remains silent as to the Taber stiffness of the absorbent core.

Iskra discloses a disposable diaper 10, as shown in figure 1, comprising an absorbent core 16, as shown in figure 3. The absorbent core 16 has a Taber stiffness of less than about 7 g/cm, as disclosed in column 3, lines 31-40. The low Taber stiffness of the absorbent core 16 allows the absorbent core 16 to be flexible enough to bend to form the shape of the diaper 10, as shown in figure 1.

It would therefore be obvious to one of ordinary skill in the art at the time of invention to construct the absorbent core of Watanabe with a Taber stiffness of less than 7 g/cm, as taught by Iskra, to give the absorbent core suitable flexibility.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Lynne Anderson whose telephone number is (571) 272-4932. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tanya Zalukaeva can be reached on (571) 272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3761

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CMA

cla

April 10, 2007

M. Kidwell  
M. Kidwell  
Primary Examiner